Subject: microcode_ctl-1.15.tar.gz incorporates broken microcode?
Posted by khorenko on Thu, 02 Nov 2006 08:06:19 GMT
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Hello Tigran,

i'm afraid there is something wrong with microcode in latest 1.15 archive, it
fails to be loaded on at least 2 completely different nodes
while microcode from 1.14 can be written successfuly.
Could you please have a look?

[root@svconsole firmware]# microcode_ctl -u -f
microcode_ctl-1.14/intel-ia32microcode-10May2006.txt
microcode_ctl: writing microcode (length: 252928)
microcode_ctl: microcode successfuly written to /dev/cpu/microcode

[root@svconsole firmware]# dmesg | tail -n 3
IA-32 Microcode Update Driver: v1.14 <tigran@veritas.com>
microcode: CPU0 already at revision 0xe (current=0xe)
microcode: No new microdata for cpu 0

[root@svconsole firmware]# microcode_ctl -u -f
microcode_ctl-1.15/intel-ia32microcode-07Sep2006.txt
microcode_ctl: writing microcode (length: 265216)
microcode_ctl: error writing to '/dev/cpu/microcode' errno=22 (Invalid argument)
microcode_ctl: there may be messages from the driver in your system log.

[root@svconsole firmware]# dmesg |tail -n 6
IA-32 Microcode Update Driver: v1.14 <tigran@veritas.com>
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[root@svconsole firmware]# ls -Flaio /dev/cpu/microcode
9658 crw------- 1 root 10, 184 Nov 2 09:37 /dev/cpu/microcode

[root@svconsole firmware]# md5sum microcode_ctl-1.15.tar.gz
microcode_ctl-1.15/intel-ia32microcode-07Sep2006.txt
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30e65074b4e9c0a43ef7a07d22a62506
microcode_ctl-1.15/intel-ia32microcode-07Sep2006.txt

[root@svconsole firmware]# uname -a
Linux svconsole 2.6.9-34.EL #1 Fri Feb 24 16:44:51 EST 2006 i686 i686 i386
GNU/Linux

[root@svconsole firmware]# cat /proc/cpuinfo
processor : 0
vendor_id : GenuineIntel
cpu family : 6
model : 7
model name : Pentium III (Katmai)
stepping : 3
cpu MHz : 501.193
cache size : 512 KB
fdiv_bug : no
hlt_bug : no
f00f_bug : no
coma_bug : no
fpu : yes
fpu_exception : yes
cpuid level : 2
wp : yes
flags : fpu vme de pse tsc msr pae mce cx8 mtrr pge mca cmov pat
pse36 mmx fxsr sse
bogomips : 1003.29

Please, let me know if you need any other info.

Thank you!

--
Best regards,
Konstantin Khorenko

SWsoft Virtuozzo/OpenVZ Linux kernel team

Subject: Re: microcode_ctl-1.15.tar.gz incorporates broken microcode?
Posted by Tigran Aivazian on Thu, 02 Nov 2006 12:17:24 GMT
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Hello Konstantin,

This has been fixed in the latest version of the kernel device driver. So,
upgrade your kernel and the message will go away.

Kind regards
Tigran

On Thu, 2 Nov 2006, Konstantin Khorenko wrote:

> Hello Tigran,
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> cpuid level   : 2
> wp   : yes
> flags   : fpu vme de pse tsc msr pae mce cx8 mtrr pge mca cmov pat
> pse36 mmx fxsr sse
> bogomips   : 1003.29
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> Please, let me know if you need any other info.
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> Thank you!
>
> --
> Best regards,
> Konstantin Khorenko
>
> SWsoft Virtuozzo/OpenVZ Linux kernel team
>

Subject: Re: microcode_ctl-1.15.tar.gz incorporates broken microcode?
Posted by khorenko on Fri, 03 Nov 2006 09:04:23 GMT
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Hello Tigran,

thank you very much for your help!

Is it true that following patch is responsible for the messages?
 http://linux.bkbits.net:8080/linux-2.6/gnupatch@451a9864jKk9 Jk5CliEBE9pB86swnw
(which applies after clean-up patch
 http://linux.bkbits.net:8080/linux-2.6/gnupatch@451a9861MOur p8RhosNAAOMcAIh9bw)

Pity that the idea to check the driver itself didn't come to me earlier, but
those messages on the site (http://urbanmyth.org/microcode/) are so optimistic:
---
microcode_ctl-1.15.tar.gz (264K)
    * (19th September 2006) Updated microcode within archive, but really the
code is unchanged from 1.11
---

and the idea that no any code that deals with the microcode is needed to be upgraded was so evident at the first glance, especially looking at the notices about which utility versions are required for each particular microcode version and a calming note that:
"This utility requires the Linux kernel IA32 microcode driver (2.4.0-test1-ac10 or 2.2.18 onwards)."

How do you think is it makes sense to mention explicitly on the site that microcode from microcode_ctl-1.15.tar.gz and higher requires patches XXX to be applied to the microcode kernel driver?
(It might be simpler to say that it requires microcode kernel driver version YYY, but the version number was not modified yet...)

Thank you once again!

--
Best regards,
Konstantin Khorenko

SWsoft Virtuozzo/OpenVZ Linux kernel team

Tigran Aivazian wrote:
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